

From: Bob Tate [tater75@msn.com]  
Sent: Thursday, November 29, 2001 2:29 PM  
To: Amy Grotefendt  
Subject: Comments re:meeting of Nov.28

1. Most important comment of the day: Aubrey Davis' reminder that no matter what we build we will fall short 100,000 vehicles of meeting the need. He was responding to calls for more money for TDM as a means to reduce the need for added lanes, but the statement has even broader implications-including the necessity to include the eight-lane option in the EIS.

2. As with any group we get caught up in our own jargon at the risk of losing focus. Aside from the engineering aspects, the real question in the six-lane/eight-lane debate is whether or not to include a GP lane. The bike lane is a requirement of the feds; the HOV lane is a part of the regional transportation plan; and the general public is most interested in a GP lane. Would it help us-and the public-to label the options more precisely: added HOV and added HOV/GP options? And include both in the EIS.

3. It became quite clear at the meeting that the promise to make mitigation/enhancement an integral part of the package is extremely important to communities on both sides of the lake. The staff would do well to demonstrate more clearly that this commitment is being met.

4. Kudos to the engineers, etc. who were available with their drawings and other materials. Very helpful. Bob Tate

To: Amy Grotefendt

From: Bob Tate, Advisory Committee

Re: Identification of Alternatives for Project EIS

While the Advisory Committee is meeting on January 9<sup>th</sup>, I will be basking in the sun in Mexico. Hence, this note conveying some of my thoughts for consideration. Please include these comments with others submitted by advisory committee members.

#### **PURPOSE OF THE PROPOSED ACTION**

The purpose of the proposed action is to *improve mobility for people and goods* across lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is *safe, reliable, and cost-effective*, while avoiding, minimizing and/or *mitigating impacts on affected neighborhoods* and the *environment*.

#### **APPROACH**

- The vitality of the highly populated areas on both sides of Lake Washington requires ready access between the two.
- It is best to provide the commuters with desirable options as opposed to assessing penalties or mandating methods of travel.
- At some point the common good must prevail over individual rights; however, the quality of life for the neighbor should not be forgotten in an attempt to improve the life of the commuter.
- This is the best, and perhaps the only, opportunity to make significant improvements in the 520 corridor in the lifetime of most committee members. Taking full advantage of the opportunity is imperative.

#### **COMMENTS:**

- Clyde Hill by the nature of its topography needs/requires special help.
- Include detailed *mitigation and enhancement* plans to correct *impacts on affected neighborhoods* as an integral part of each option. It is important that these plans not ever appear to be an add-on feature and that they be conceived in concert with the communities.

- A prime *safety requirement* is the elimination of “the weave” in both directions. The tunnel concept eliminates much traffic from I-5 altogether and effectively reduces the eight lanes to six lanes east of the Roanoke I-5/520 interchange. The proposed change in overhead ramps can work going west on 520, but I haven’t yet seen the plan or costs for elimination of weave for eastbound traffic.
- Include wide shoulders for *safety* and *reliability* reasons.
- Support Sound Transit recommendation for I-90 light rail plan, with BRT for the 520 corridor.
- Consider shuttle buses to University of Washington from eastside parking lots as per current football game days plan as *TDM measure*.
- Consider regional “hot-lane” concept with use of transponders to record trips and charge to credit card as *TDM measure*.
- Include 4-lane option - Does not meet purpose of study but required in EIS
- Include 6-lane option - HOV lane good for buses and car poolers and perhaps, TDM. However has serious drawbacks: will *improve mobility* by only 3%, congestion will soon surpass today’s level with resulting air pollution and cut-through traffic affecting our community. Limited improvements for average driver or for transport of goods.
- Include eight-lane option (three GP and one HOV/BRT) - Strongly support. Best of plans to improve *mobility, reliability*, and a *safety for people and goods*. Would *reduce neighborhood impacts of air pollution and cut-through traffic* caused by traffic congestion. Best plan for average trans-lake traveler and for anticipated population increase.

To: Members of the Trans Lake Washington Advisory Committee, and supporting staff members

From: Jean Leed, Seattle Representative for Montlake

Date: January 6, 2002

Due to business travel out of town, I am unable to attend our final meeting on January 9 and am therefore conveying my thoughts and recommendations by letter. It is my understanding that the questions we will be asked to comment on are the same ones developed for the Technical Committee at its final meeting on December 12, 2001, so responses to them compose the bulk of my letter.

I have served as the Montlake liaison to the Trans Lake Committee since June 1997. I joined because I believe this is our region's last chance for significant changes in the SR 520 corridor (which passes directly through the Montlake neighborhood), and I want to encourage a long-term view. We won't have another chance for significant change in the corridor during our lifetimes.

Based on the resolutions passed by the Community Club and the comments I have received from Montlake community members during that period, I can attest that there is a high level of support here for developing other modes of travel in the SR 520 corridor besides single occupancy vehicles (SOV's). Most residents favor reducing dependence on cars, while recognizing that the long-term economic vitality and mobility in this region require public investment in alternative modes of travel: transit, buses, carpooling, bike paths, pedestrian paths, etc.

We are equally concerned that any such changes preserve (and even improve) the quality of life we value: enhancing safety and reliability, reducing noise and air pollution, preserving environmentally sensitive areas, and reunifying communities (such as our own) which are bifurcated by busy freeways and arterials. Thus, here are my comments on the options under consideration for the next phase of the Trans Lake Study.

Transportation Demand Management (TDM): Reducing demand for roads (through both incentives and penalties) is in the long run the cheapest and most effective way to address our transportation needs. The EIS should examine the impact of aggressive Transportation Demand Management, and also Transportation System Management to make travel safer, more reliable, and shorter.

High Capacity Transit (HCT) options:

- HOV/Bus Rapid Transit lanes: Dedicated bus and HOV lanes are the next most cost-effective way to move large numbers of people throughout the region. Currently SR 520 and sections of I-5 through Seattle are the only two major thoroughways without continuous dedicated HOV lanes. However, it is essential that such lanes cannot be converted to general purpose lanes in response to political pressure (*cf.* current efforts to strip I-90 of its dedicated transit lanes). Buses also will congest Seattle arterials once they exit the freeways. I am therefore doubtful that Bus Rapid Transit is a long-term "solution", but it can help in the immediate future.
- Fixed guideway transit on the 520 corridor or on I-90? I-90 still seems the better corridor for rail transit through about 2020 (if that right-of-way can be preserved for transit). By then, however, transit will be needed and viable on both corridors. I am therefore concerned that the upcoming EIS take into consideration the need to preserve right-of-

way for future transit (probably exiting from the 520 corridor before it reaches Montlake and going toward the University District).

How many lanes of traffic on SR 520? The current four-lane configuration would have the least impact on the Montlake area. In any case, there should be no more than six road lanes on SR 520, two of which should be dedicated to HOV/bus travel. Any roadway larger than this through residential areas on both sides of the lake would require more land than is available and would do irreparable damage to wetlands and other sensitive areas. It would also increase noise, air pollution, and traffic on streets and arterials beyond the level they can sustain.

Lids: Lidding could provide mitigation for past and potential future impacts of SR 520 in Montlake. There should be further exploration of the possibilities and advantages of lidding in the land-based areas of the corridor. The lids should be short enough not to require ventilation tubes, and long enough to allow for reconnecting neighborhoods through amenities like parks and safe open space.

In sum, these criteria suggest that Options 1 (no change), 2 (four GP lanes, plus bike/ped access), and 3 (four GP and two HOV lanes, plus bike/ped access) should be carried forward in the EIS. Option 7 (adding an HOV/BRT lane and connections to the current four GP lanes) also deserves further study, but only if it could be done within the existing right-of-way. While fixed guideway in the SR 520 corridor (as contemplated in Option 5) is not needed now (assuming transit is built on I-90), I encourage further exploration of providing for the future right-of-way, so that decisions made now do not preclude that possibility later.

The Montlake Community Club has voted against further study of a second crossing of the Montlake Cut, due primarily to environmental concerns and other impacts on local residents. MCC also supports confining any new facility to the existing right-of-way. Traffic impacts on Montlake Boulevard are already beyond capacity, due largely to traffic bound for or exiting from SR 520. Therefore we urge further exploration in the EIS of every possible way to contain and/or mitigate any increase of vehicles on Montlake Boulevard due to changes in the SR 520 corridor.

The Montlake community remains deeply interested in the Trans Lake process and will continue to be highly involved throughout the EIS process and beyond, since any changes in the SR 520 corridor will inevitably impact our community. We do want to thank the TLW consultants for meeting with our community on several occasions to discuss our concerns, and hope for continued cooperation.

# Northeast District Council

4534 University Way NE  
Seattle, WA 98105  
(206) 233-3732

December 6, 2001

## Members

*Greater University  
Chamber of Commerce*

*Hawthorne Hills  
Community Council*

*Inverness Community  
Club*

*Inverness Park  
Homeowners  
Association*

*Laurelhurst Community  
Club*

*Montlake Community  
Club*

*Portage Bay/Roanoke  
Park Community  
Council*

*Ravenna Bryant  
Community Association*

*Ravenna Springs  
Community Group*

*Roosevelt Chamber of  
Commerce*

*Roosevelt  
Neighborhood  
Association*

*Roosevelt Neighbor's  
Alliance*

*University District  
Community Council*

*University Park  
Community Club*

*View Ridge Community  
Council*

*Wedgwood Community  
Council*

*Windermere  
Corporation*

*Windermere North  
Community Association*

Mayor Paul Schell and Members of the Seattle City Council  
Municipal Building  
600 Fourth Avenue  
Seattle, Washington 98104-1876

Fax 684-5360 / 684-8587

Trans-Lake Washington Project  
401 Second Avenue South, #300  
Seattle, Washington 98104

Fax 464-6084

RE: Trans-Lake Washington Project

Dear Mayor Schell, Members of the City Council and the Members of the Trans-Lake Washington Study Committee:

Enclosed please find copy of a petition from the Montlake Hamlin-Shelby Residents regarding the Trans-Lake Washington Project. The petition calls for inclusion of a review of what the authors call the "Seattle Alternative" in the Environmental Impact Statement. At its meeting of November 1, 2001 the Northeast District Council examined and discussed this petition including the "Seattle Alternative." We found that the petition is consistent with and encompassed by all previous NEDC positions on the Trans-Lake Washington Project and substantially consistent with the resolution adopted by the Seattle City Council calling for no expansion of SR 520 other than possibly for transit purposes. Accordingly a motion to endorse this petition was adopted unanimously by the Council with two abstentions.

We are concerned that alternatives proposed for study in the Environmental Impact Statement should substantially comply with City of Seattle Resolution 29574. Some alternatives under consideration call for the addition of general purpose lanes to SR 520, something rejected by the City's resolution. Given the fundamental realities that underlay the adoption of that resolution and persist to this today, the basic conclusion is that the streets of Seattle cannot absorb more single-occupancy vehicles.

We urge you to act in conformity with the attached petition. Thank you for considering the views of the Northeast District Council. Please keep us informed at the Trans-Lake Project moves forward.

Sincerely,

*JIM SIMPKINS*

Jim Simpkins, Co-Chair  
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cc: Senators Pat Thibeaudeau and Ken Jacobsen; Speaker Frank Chopp and Representatives Ed Murray, Jim McIntire and Phyllis Kenney

**PETITION**  
**of the Montlake Hamlin-Shelby Residents**  
**regarding the**  
**Trans-Lake Washington Study**

**To the Trans-Lake Washington Project and the Mayor and City Council of the City of Seattle:**

The residents of the Hamlin-Shelby neighborhood recognize that the City of Seattle, including this Montlake Community, suffers from an urgent transportation crisis. We also recognize that congestion in the SR-520 Corridor is a significant piece of that crisis, and agree that measures to improve SR-520's capacity are urgently needed.

At the same time, we are convinced that these capacity improvements can be accomplished without further destruction of natural or built environments, or by relocating traffic congestions problems to other parts of the City's arterial and freeway system, such as the I-5 Corridor and Northeast Pacific Street.

We therefore ask that the Trans-Lake Washington Project develop an alternative to be studies in the Project's forthcoming EIS, based on criteria stated in the 1997 City of Seattle Resolution (Res. 29574). The elements of this alternative are listed below as "The Seattle Alternative." We further ask that the City of Seattle vigorously support this Petition by formally requesting that this alternative be included in the Trans-Lake Washington EIS.

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**"THE SEATTLE ALTERNATIVE"**

- a. That the completed project be contained within the current right-of-way, which previous SR-520 project proposals have shown can easily accommodate at least six lanes of traffic, plus off-ramps, shoulders, overpass and lid structures and necessary clearances; and
- b. Enlarge the existing SR0520 freeway to no more than six lanes, two of which shall be for transit, van and carpools only; and
- c. Construct no additional ramps, especially no such ramps or freeway extensions across the Montlake Cut; and
- d. Fully mitigate or avoid SR-520's environmental impacts, existing and proposed, on built and natural environments within Seattle; and
- e. Assume that the City of Seattle will embark on a initiative to enact TransportationDemand Management (TDM) legislation, to be adopted in conjunction with adoption of any proposals for Trans-Lake Washington capacity improvements.

From: Glenn and Bertha Eades [geades@seanet.com]  
Sent: Monday, December 03, 2001 7:34 PM  
To: Amy Grotefendt  
Cc: Pat Serie  
Subject: Re: Trans-Lake 11/28 Workshop Follow-up

Pat Serie, Amy Grotefendt-

First it needs to be made absolutely clear to everyone exactly what is meant by Bus Rapid Transit. Is it a whole lot express buses sharing a carpool lane or is it a bus with separate lane and a guideway system?

There is at least one thing that needs to be discussed about any form of bus rapid transit before the area falls all over itself to come to the cheapest at the moment and damn the future solution. It is the problem of holding areas at stations for the number of buses that would be needed to serve the expected transit ridership. Using the downtown bus tunnel as an example the stations can hold 4 maybe 5 busses at a time while loading and unloading. If one or two of them is operating the wheelchair ramp how would this affect the flow? Would buses coming from behind be able to pass and slip between two that are already sitting there?

As I see it with 2 minute headways you would have to unload and load a bus in 2 minutes because there is another bus coming in that time. That would also depend on every one being right at their Bay because there would be no time for anyone to get to the bus from very far away in that time. The proponents of this say that there will be another bus along in 2 minutes. What if that bus is not going where you want to go. If you just miss the bus for Redmond and the next ones in the row are going to the University district, Northgate, or Bothell that is not going to help much.

In the technology study that was done for this project it is pointed out that even with even with 2 minute headways the regular bus and the bus on guideway concept have the lowest capacity of any of the options studied. It is also pointed out that when the headway is that low[high?] the speed has to be reduced considerably. The buses do not go very fast in the tunnel but once on the 520 bridge it would be hoped that they would be able to go faster. Perhaps not if they have to compete in the carpool lanes.

I do not understand why some people feel the need to have a flexible transit system. As a person who rides the bus several times a month I want to know that the bus will always come at the same time and that it will always travel on the same street. That is the most efficient way to travel. Otherwise every six months or so I have to figure what route it is going to take, how often is it coming and how long is it going to take to get to the bus stop. Stability is the key to a less stressful life and is one of the reasons people use transit in the first place.

People that use transit also want to get from one place to another by the most direct route possible and not take a general tour of every hill and dale, neighborhoods and shopping centers before they get where they want to go.

What has happened to the bicycle path? In the sectional views of different



areas I could not see any bike paths until 148th. What happens between 148th and Montlake?

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I would like to have a copy of the proposed improvements in the sections from 148th to Redmond-Fall City Road. I would like to have this before the meeting of the Redmond Bike-Ped. Committee on Dec. 10.

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I am concerned about the view that TDM's can solve all of the transportation problems in the area. It can be a very good tool for those people that work at regular jobs at regular hours. There are many people that do not fit into that category. Some of the people that I ride the bus with are minimum wage workers that work odd hours in Redmond. There are others going to or coming from appointments. Those who cannot drive for one reason or another and wish to go shopping or visiting need to have an efficient and direct transit system.

To not have a transit system that allows everyone to move freely about all day and into the evening is social engineering. Those people are made prisoners in their homes or are forced to spend some of the small amount of money that they have on a car, licence, insurance, gasoline, and maintenance. If anyone is really serious about drunk or reckless driving there needs to be a way to get these people to their work place without having a car. These are the very people that may work at odd hours and in odd places and do not fit into the TDM model.

-Bertha Eades

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Bertha Eades	geades@seanet.com
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From: John Resha [jresha@grtma.org]  
Sent: Friday, December 07, 2001 9:18 AM  
To: Amy Grotefendt  
Subject: RE: Trans-Lake 11/28 Workshop Follow-up

Thank you for forwarding questions and comments from our discussion.

The area I believe needs some immediate attention is Transportation Demand Management.

Having had more than 10 years of direct experience in developing, implementing and managing TDM programs and services for the public and private sector, as well as having involvement with a few different TMA's, I believe I have some understanding of the concept. And what I have heard to date about Translake TDM leaves me with a very uneasy feeling.

I am concerned that the concept has been deemed "politically correct" to include and therefore a few ideas have been identified and assumed to carry forward. My concern is that the idea of TDM doesn't just become a target to throw some money at so we, the State of WA, can say we did some TDM.

When working on the SOV and HOV concepts real planning has been conducted. Possible outcomes have been evaluated for results. And concrete recommendations have become available for review and discussion. Yet with TDM no plans have been openly proposed, no potential results have been evaluated or even modeled, and no discussion opportunity has been provided.

While all of this could be interpreted as a vote against including the concept, that would be an incorrect assumption. What I believe is that TDM is a critical element of our entire transportation system. However, if we do not attach some substance, plan, or MEASURABLE goal, this concept will be an easy target for voter and legislator concern (thereby undermining a basic tenet of our entire plan and recommendation).

I am also concerned that a blanket approach or assumption to TDM for the region will not result in anything more than what we have today.

I respect the brain power and planning experience enlisted to add to the concept of TDM for this project, but I do not perceive that we have done much beyond a jurisdictional perspective of what has been done and how it might relate to our future.

I look forward to reviewing Parametrix report on TDM to help clarify some of my concerns and I look forward to a real discussion about TDM as it relates to Translake.

John Resha  
Advisory Committee Member

# N.O.I.S.E.

## *NEIGHBORHOODS OPPOSED TO INTERSTATE SOUND EXPOSURE*

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### N.O.I.S.E.'s Response to the November 28, 2001 Trans-Lake Washington Project All Committee Presentation

by

Theodore Lane, Ph.D.  
Chairperson, N.O.I.S.E.

#### BACKGROUND

The Trans-Lake Washington Project (TLWP) team made an “all committee” presentation on November 28<sup>th</sup> at which findings from a case study of noise impacts at the intersection of SR-520 and 84<sup>th</sup> Avenue N.E., Medina, were used to present preliminary noise impact findings and discuss noise mitigation strategies. A major finding was that noise barriers are as effective as lids in mitigating impacts. The implicit strategy was that noise barriers would satisfy the federal Highway Department’s noise mitigation requirements for new highway construction.

#### CONCERNS

The TLWP’s noise analysis inadequately addressed the issues of community noise impacts for the following reasons:

- ❑ The entire case study analysis is based on a 67 dBA noise threshold measured at 5-feet above surface level. Most bedrooms are on the second floor, and the TLWP analysis ignores them.
  - The EDA standard for residential noise impacts is a 65 LDN noise threshold that weights night-time noise for its greater impact on livability.
  - The FAA measures noise impacts using the EDA standard measured at 20 feet above surface level.
  - The TLWP’s noise analysis and strategy discussion consequently appears to be little more than what needs to be done to get federal Highway Administration mitigation funding. It does not address what is required to prevent the proposed SR-520 expansion from degrading the quality of life in communities/neighborhoods through which it passes.
- ❑ The entire case study that was presented is based on existing conditions at the intersection of SR-520 and 84<sup>th</sup> Avenue N.E., Medina. It does not address the impacts of expanding SR-520.
  - The 6-lane alternative involves dedicated HOV/HCT lanes for busses that will emit low frequency noise pollution. These impacts are not discussed.
  - The 8-lane alternative includes a possible LINK alignment that uses steel-on-steel technology. These impacts are not discussed.

# N.O.I.S.E.

## *NEIGHBORHOODS OPPOSED TO INTERSTATE SOUND EXPOSURE*

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- Shifting the bridge/roadway several hundred feet to the north will expose new residences to noise pollution. These impacts are not discussed.
- Members of the TLWP team stated that eliminating SR-520's "weaves" might allow for corridor speeds (perhaps, on managed lanes) of up to 70 mph. Higher speeds will generate more noise. These impacts are not discussed.
- The impacts of noise over water, and how such noise will impact homes along the shorelines of Lake Washington and Portage Bay are not discussed.
- Raising the roadway by 25 feet in Portage Bay, proposed as part of the 8-lane alternative, will create new noise impacts. These impacts are not discussed.
- The building of a new expanded fly-over bridge at the intersection of SR-520 and I-5 in the Roanoke Park/Eastlake area of Seattle will create new noise (as well as visual) impacts. These impacts are not discussed.
- The use of different roadway surfaces to attenuate noise impacts, and the incorporation of best surfaces for attenuating community/neighborhood noise impacts into engineering designs for the alternatives is not discussed.

### CONCLUSION

TLWP's noise analysis and noise attenuation strategies have little to do with (a) protecting communities/neighborhoods from the intrusion of new SR-520 noise pollution, (b) providing noise attenuation parameters to guide the design of SR-520 alternatives, or (c) establishing thresholds for the protection of community/neighborhood quality of life.

The case study discussed at the "all committees" meeting last week demonstrated that existing noise pollution at the one SR-520 location studied already exceeds federal Highway Administration requirements to fund construction of noise barriers as part of any new construction project. It appears that TLWP's only strategy is to do what the feds will pay for in terms of impact mitigation.

Two years ago, the TLWP committed itself to make strategies for protecting the quality of life in communities/neighborhoods along the SR-520 corridor "integral to and inseparable from" the design of expansion alternatives. Today, less than 60 days from when the Executive Committee will be asked to choose among alternatives to be studied in the EIS, there has been no analysis of noise pollution impacts among alternatives and no incorporation of noise attenuating strategies in the design of the alternatives. We were told at the meeting that community noise impacts will be studied after the alternatives are selected – when it is too late for the information to guide either the evaluation or choice of which alternatives are to be studied in the EIS.

This is an unacceptable situation. It is a breach of faith. It sets the foundation for confrontational politics to replace collegial interaction between TLWP and community organizations. It needs to be rectified before the TLWP goes forward.

From: Freedman.Jonathan@epamail.epa.gov  
Sent: Friday, November 30, 2001 11:31 AM  
To: Amy Grotefendt  
Cc: Patricia Serie  
Subject: Comments on 11/29/01 All Committee Meeting

Pat and Amy: I thought I should comment quickly while things are still fresh in my mind.

First of all, we support the inclusion of the safety / preservation alternative, and support moving forward toward the draft EIS with the broadest range of reasonable alternatives, appropriate to the project purpose and need. The CEQ regulations instruct that the alternatives section is the heart of the EIS and that all reasonable alternatives should be "rigorously explored and objectively evaluated". The impacts of the alternatives should be presented "in comparative form, thus sharply defining the issues and providing a clear basis for choice". Enough chapter and verse, but in our experience when the range of reasonable alternatives remains appropriately broad into the DEIS, it leads to better decisions.

TDM: We support vigorous exploration of very aggressive TDM measures for two reasons. First, as non-construction measures, if successful, they facilitate the movement of people and goods across the Lake by taking SOVs off the road without construction, and hence, no adverse impacts (possibly beneficial with fewer emissions. Second, as a non-construction option, it is very cheap compared to adding lanes, without the risks of inducing traffic (not solving the problem) that lanes bring, as mounting recent evidence shows.

Clarify the definition of TDM consider using the broadest definition possible: What I said and meant more specifically was the following: Things such as lane management, congestion pricing, partnerships with business that show promise (like proximate commuting), regional efforts to deregulate parking, change insurance costs and support for non-motorized transportation, all as items that can reduce SOV trips, should be thought of as forms of TDM, even if they haven't in the past, and we should strongly consider including them as part of TransLake's TDM package.

Present congestion, and even future with-project conditions, calls for very aggressive TDM on a regional scale. As a least-cost action, TDM should be done right away and monitored. Then let's find out what works and do more of it, what doesn't work and cut it back. So, we support Jeff Peacock's ideas on adaptively managing TDM. We made exactly the same comment on the I-405 EIS. An added thought - since unlike I-405, 25% of trips of 520 are work trips, it may be possible to streamline the TransLake TDM program and lower costs even more.

I-405, to some extent, is now a fixed target, making the TransLake job easier, but we still don't know how what Sound Transit is going to do and whether I-90 will eventually have transit.

The project should examine how many cars can be removed using HCT or TDM, and then should figure out how many lanes that will not need to be built... We would argue for adaptive project management here just as we did on I-405 for that reason. Thus, if TDM or transit work better than expected, it might be possible adapt the project to avoid "full-build out" for general purpose lanes, or avoid them in some critical resource locations, or something similar.

Induced growth again: we are concerned about induced traffic and sprawl any time new lanes are added. It may be less of a problem here than on I-405, but the project team should be prepared to analyze induced growth as a cumulative impact, and should also figure out how to take a stab at estimating critical resource thresholds and whether cumulative impacts from induced travel and sprawl cause them to be exceeded.

I would like to get my hands on the traffic study that Mr. Mike? Horn was involved in so I can understand how the post-project condition compares with the future without, and stuff like that. He instructed me to go through channels on that one.

Jonathan Freedman      (206) 553-0266  
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Geographic Implementation Unit  
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From: Jim MacIsaac [jwmacisaac@msn.com]  
Sent: Monday, December 17, 2001 5:12 AM  
To: Amy Grotefendt  
Subject: Fw: Trans-Lake Alts Evaluation and a "Phase 1 Action Plan"

----- Original Message -----

From: Jim MacIsaac  
To: Serie, Pat  
Sent: Monday, December 17, 2001 3:12 AM  
Subject: Fw: Trans-Lake Alts Evaluation and a "Phase 1 Action Plan"

Hi Pat --

The 8-lane presentations at our November joint committee workshop provided some very good new options for resolving existing weaving problems on I-5. However, I am concerned that the 8-lane alternative packages have otherwise been built up for rejection, unless we can devise a phased program that could build to an acceptable 8-lane package. This has caused me to resurrect a modification of a package that I originally submitted over two years ago as a "Minimum Build" package. Gene Wasserman discussed this revised proposal in part with you over a week ago. I have withheld its submission to you until after hearing reaction from a business group caucus meeting last Friday. In addition to those persons noted in the message below, that meeting included additional members of the Seattle business community. I believe you will be hearing from that group including a strong recommendation for consideration of my proposal.

Attached is my memo to that group providing a brief analysis of the eight alternative packages as we knew them last June. I goes on to describe my modified proposal that could become a phased element of larger corridor development packages. I termed it as "Alt 8A", but it could perhaps be better termed "Alt 2A". In effect it focuses on the existing "bottleneck" problem of the SR-520 corridor and a proposal to first fix the bottleneck as an extended option to Alt 2.

The Executive Committee rejected my earlier version of this proposal, since it did not result in painting a diamond on any first two lanes added to the Trans-Lake portion of the corridor. I do hope the Executive Committee will reevaluate this shortsighted conclusion. My proposal would not only preserve and enhance Transit/HOV operations on SR-520, it would also offer badly needed improvement for the 80% of persons moved on the corridor in non-HOV and freight modes. It offers a lower-cost win win option for all corridor users at minimal environmental impact while also addressing some improvements to the Montlake Mess.

Please forward this message and its attachments to the study team. I believe that you will be receiving support from the business community to include this proposal not only as a potential corridor development stage, but also as a requested stand-alone alternative.

Sincerely, Jim MacIsaac

----- Original Message -----

From: Jim MacIsaac

To: Councilman Rob McKenna ; Chris Johnson ; Bruce Nurse ; Janet Ray ; Douglas Pullen ; Weed, Mark ; Eugene Wasserman  
Sent: Thursday, December 06, 2001 6:13 AM  
Subject: Trans-Lake Alts Evaluation and a "Phase 1 Action Plan"

Attached is a brief analysis of the 8 alternative packages for the Trans-Lake project as presented in June 2001. To that I have added a potential "Phase 1 Action Plan" that may be necessary to help obtain early funding to do anything on SR-520. It is really an option to proceed with Alternative 2 - Safety and Preservation, but replacing the bridge, its approaches and the Portage Bay viaduct with wider structures to ultimately accommodate 8 lanes, but with interim use as six lanes that balance out the corridor capacity with its existing feeder capacity on both sides of the lake. Currently the bridge is the corridor bottleneck as evidenced with the severe traffic backups on all of its approaches. This Phase 1 proposal would keep ALL traffic free-flowing across the lake, maintain transit/HOV priority on the bridge approaches, and provide some fix for the Montlake mess.

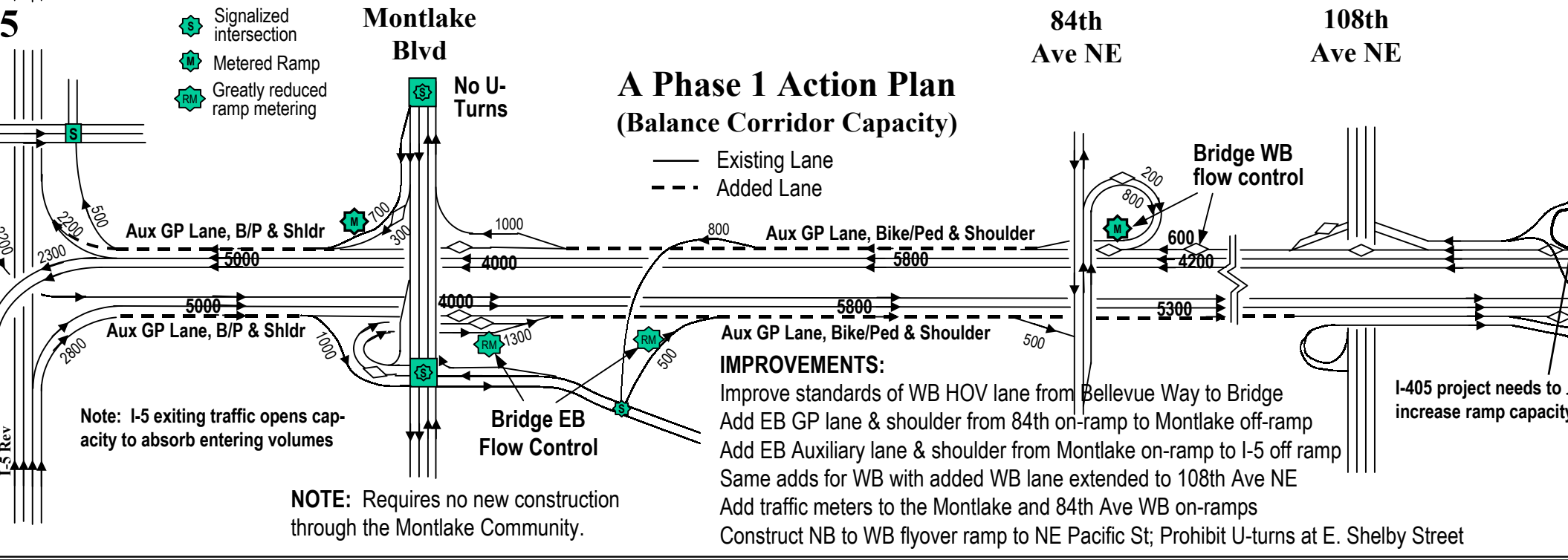
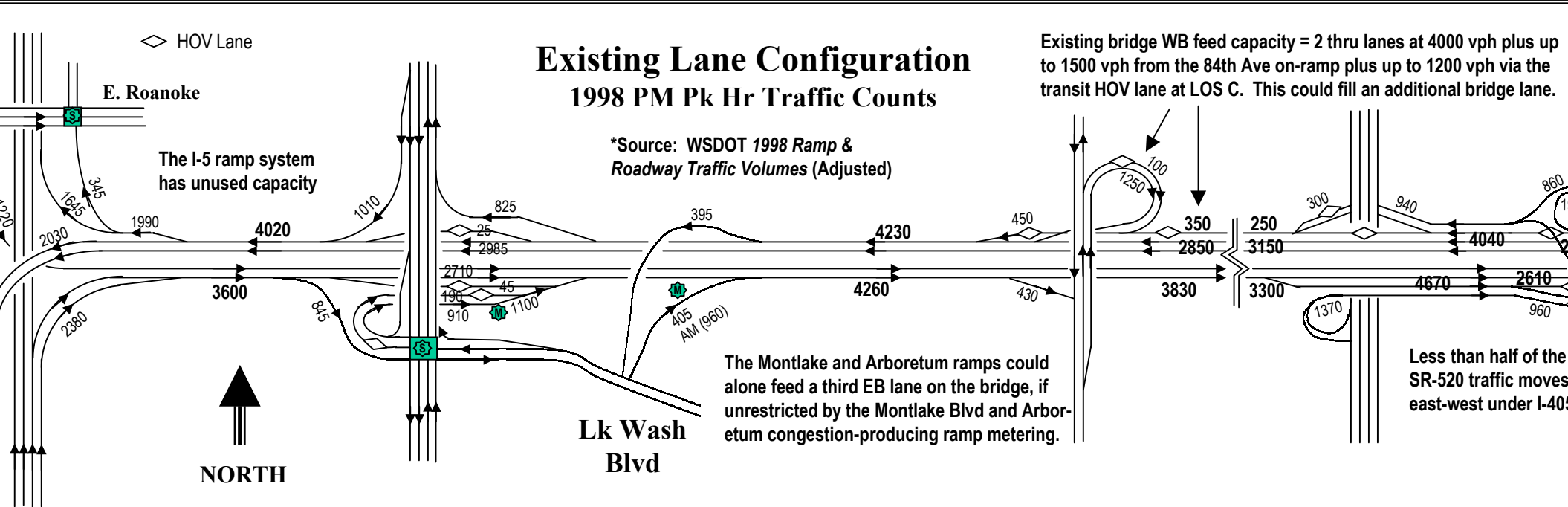
My cost guesstimate is about \$2.6 billion. It would accomplish nearly a 50% increase in trans-lake people-moving capacity -- almost as much increase as would be accomplished with the 8-lane full-blown consultant proposals. It would require no initial phase of new construction through the Montlake Community, one new eastbound lane of construction through the Points Communities, and no reconstruction of the I-5 and I-405 interchanges. It would provide the lane width on the bridge, its approaches and the Portage Bay Viaduct to accommodate the addition of exclusive HOV lanes as a subsequent phase. It is this latter phase of expansion that would cause major widening on the overland portions of the corridor, which in turn lead into the lidding options and major costs of new ramp access to exclusive HOV lanes.

You will see that no new east-west thru-traffic capacity is needed at the I-405 interchange under the "8-lane" alternatives. Any rebuild of the I-405 interchange would mostly be precipitated by the consultant-proposed overlay of transit/HOV ramp systems and/or the I-405 expansion project. The City of Bellevue should be very concerned about the interchange plans proposed by the consultant team. They eliminate some important I-405 local access via SR-520 which flies directly in the face of Bellevue's need to expand access between both freeways and its major growth plans for its CBD.

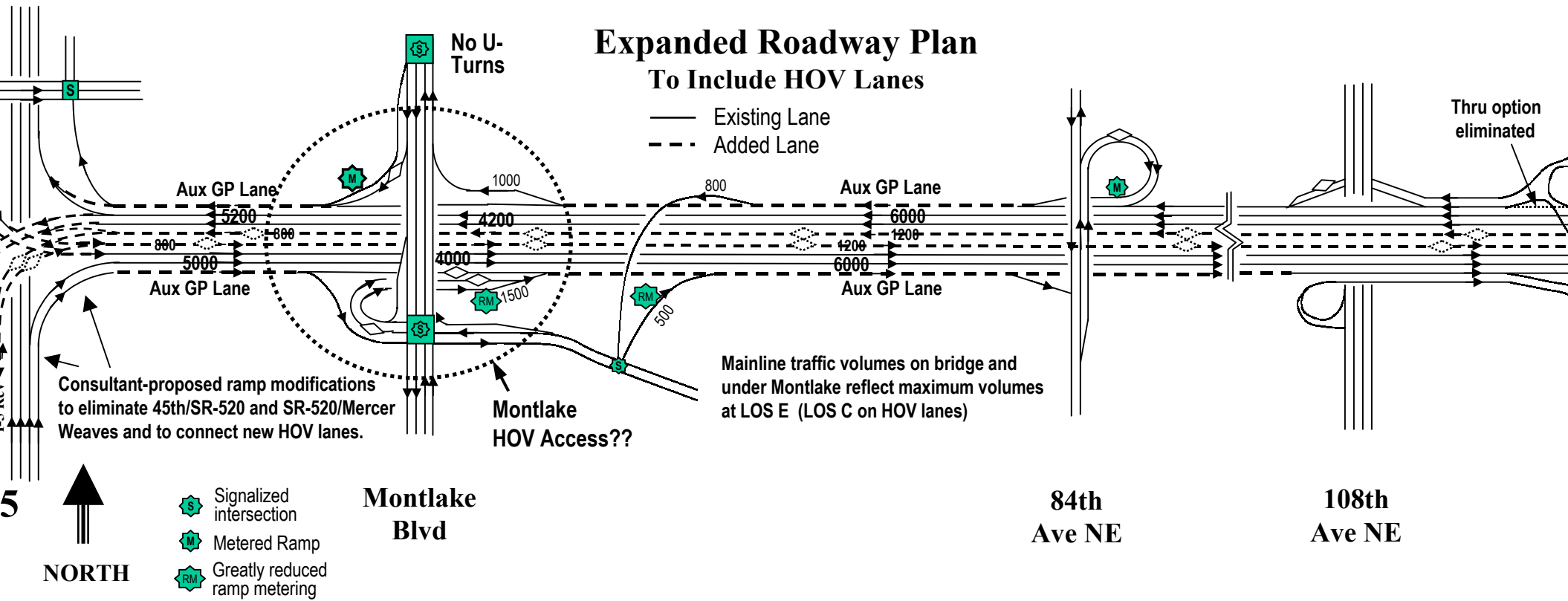
Finally I make note of the need for the Trans-Lake study team to focus more attention on the Redmond end of the corridor. It has several uncompleted improvement phases. I presume those completions and their costs are included in the capital cost estimates that have been prepared for the 7 action alternatives. Action priority between east and west corridor improvements must be developed for the funding stream that will hopefully be developed for the corridor improvement program.

Jim MacIsaac





# Expanded Roadway Plan To Include HOV Lanes



James W. MacIsaac, P.E.

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E-mail: jmacisaac@qwest.net

**DATE: December 13, 2001**

**TO: Trans-Lake Business Caucus Group**

**FROM: Jim MacIsaac**

**DRAFT**

**SUBJECT: Alternatives Evaluation and A "Phase 1 Action Plan"**

## Overview

In June 2001 the Trans-Lake study team released its *Multimodal Alternatives Evaluation Report* that included descriptions of the eight (8) alternative packages plus travel and cost estimates for each alternative as it was then known. During the 5-month hiatus a considerable amount of additional work has been carried out for the 8-lane alternatives. I believe we were all quite shocked by the magnitude of the project it has grown into, and cost estimates are likely to increase.

However, based on the interim June data I have prepared a few charts from the above report that cut to the heart of the people-moving performance of the 8 alternative packages versus the preliminary cost estimates. They provide side-by-side comparisons that are quite revealing. I preface that comparison with a brief commentary on the LRT versus BRT transit alternatives.

With fear that the 8-lane alternative may be delayed indefinitely due to its growing size and costs, I also offer for consideration a "Phase 1 Action Plan" to accommodate bus transit, HOV, SOV and freight modes on an interim basis.

## Transit Options

Alternative 2 is to represent maintenance and preservation of I-90 and SR-520 only. I strongly recommend that the Executive Committee remove LRT on I-90 from Alternative 2.

The table shows the 2020 average weekday rider estimates for the transit modes. In all cases they represent about 10 to 11 percent of total weekday person trips on the two bridges combined. Note

how transit use increases as bridge traffic capacity increases (a modeling quirk?). Note how there is little difference in ridership between the LRT and BRT options – but a huge difference in cost, particularly for the SR-520 Alternatives. Sound Transit is strongly pushing for LRT on I-90 and BRT on SR-520. I believe Alts 5 and 6 are headed for the scrap heap. ST will have to justify the cost versus performance in Alts 3 and 4. The highest transit rider estimate is produced

### 2020 I-90 Plus SR-520 Transit Passengers

	Transit Trips AWDT	Incr Over No Action	Transit Cost Est
Alt 1: No Action	44,900	Base	(\$millions)
Alt 2: M & P + I-90 LRT	48,200	3,300	\$2,720
Alt 3: I-90 LRT, 520 HOV	50,100	5,200	\$2,720
Alt 4: Alt 3 + 520 GP	54,400	9,500	\$2,720
Alt 5: 520 LRT & HOV	45,300	400	\$4,710
Alt 6: Alt 4 + 520 GP	51,100	6,200	\$4,710
Alt 7: 520 BRT & HOV	50,300	5,400	\$270
Alt 8: Alt 7 + 520 GP	56,600	11,700	\$270

Source: June 2001 *Multimodal Alternatives Evaluation Report*.

under Alternative 8 with BRT. However, to be fair, some of the HCT costs in Alts 7 and 8 are hidden in the HOV costs.

## **People-Moving Performance**

I presume that a primary objective of this corridor study effort is to improve the people-moving performance of the Trans-Lake bridge corridors. In year 2000 the two bridges carried about 360,000 person trips per day across Lake Washington. The 2020 estimates range from 440,000 with Alt 5 to 530,000 with Alt 8 (see upper chart on next page). The "MacIsaac Phase1" Alt 8A is discussed below. No Action predicts 430,000 daily trips, a 20% increase over current person-trip estimates. That is unlikely to happen unless transit and HOV modes mostly absorb the increase; and that is not seen in the action alternative performance bars.

Note that there is little difference in mode choice crossing the lake between No Action and any of the action alternatives. Non-HOV and commercial vehicle trips range between 78% and 79% in all of the capacity enhancement alternatives. Transit and 3+HOV persons each range between 10% and 11% in all enhancement alternatives. So either the model results are haywire, or transit and HOV are relatively minor elements in improving the people-moving performance of the Trans-Lake corridors. Adding HOV lanes slightly improves performance, but primarily because it provides new capacity for the transit and HOV vehicles, freeing up some GP lane space.

The only alternatives that show a significant increase in Trans-Lake corridor people-moving (and freight-moving) performance are the SR-520 8-lane alternatives (Alts 4, 6 and 8) that add one GP lane in each direction in addition to the added HOV lanes. This is because nearly 80% of all person trips under all alternatives must be accommodated in the non-HOV lanes.

The lower chart shows the increase of Trans-Lake AWDT people moving performance for each alternative compared to the No Action alternative. The 8-lane alternatives (Alts 4, 6 and 8) improve people-moving performance by 2.5 to 4.5 times greater over No Action compared to the 6-lane alternatives adding HOV lanes only.

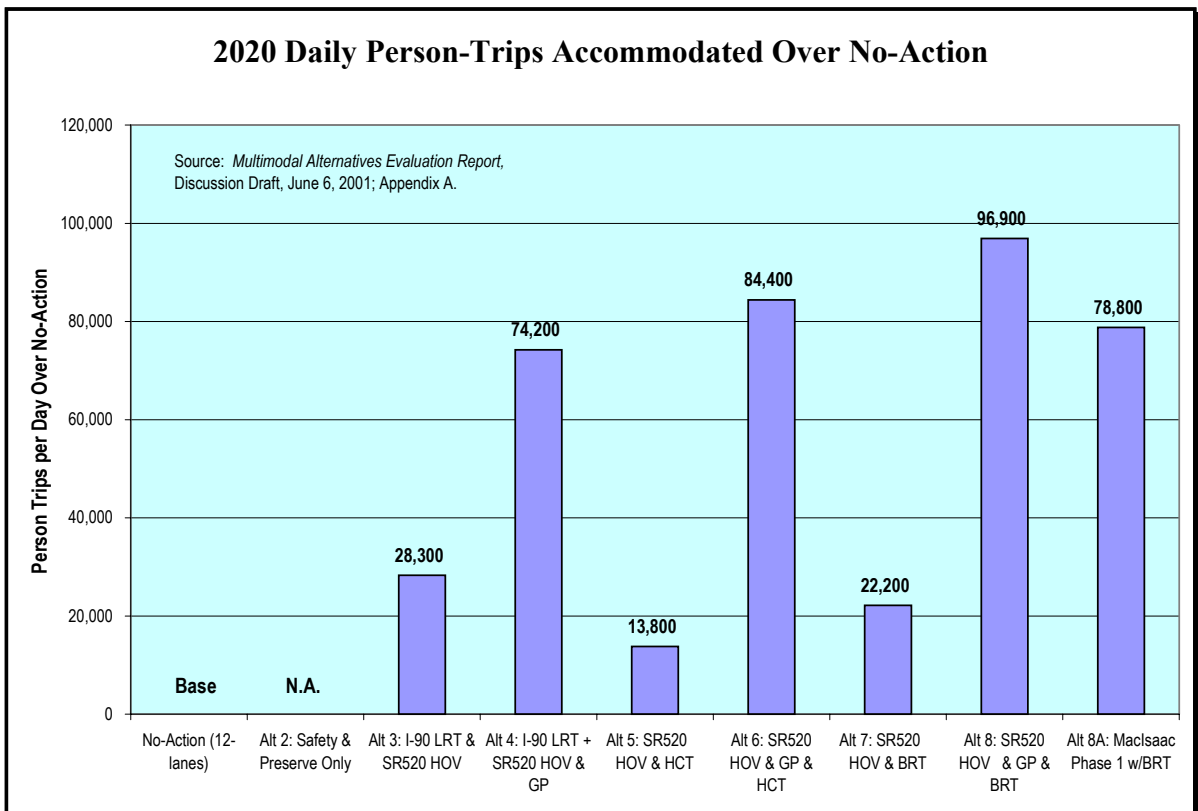
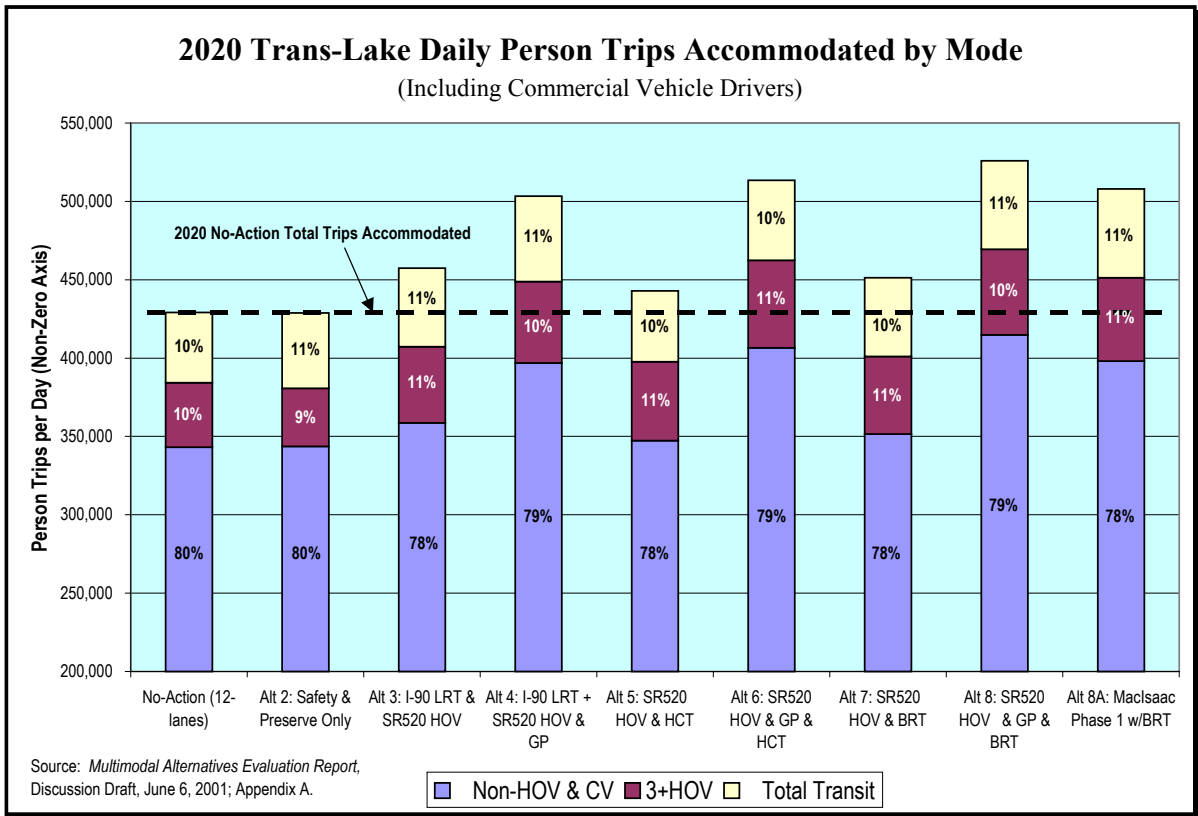
***It is quite clear that if reducing congestion for all traffic and freight movement crossing Lake Washington is any real objective of the Trans-Lake actions, we must include GP lanes in any selected final action. It would be embarrassing to effect no noticeable congestion reduction.***

## **Cost Performance**

A somewhat forgotten element of transportation planning in this region is searching for the most cost-effective alternatives. Certainly one measure of such performance is the public cost per new trip accommodated by each action alternative compared to No Action. Another element of cost performance is the added private costs of congestion (estimated by the PSRC in terms of lost time and wasted fuel expense).

At our November workshop were heard the report that travel time between I-5 and I-405 in the GP lanes by 2020 would be 13-15 minutes versus 50 minutes under No Action. That equates to over 35 minutes of timesaving for each of the 78 to 79% of person-trips carried across Lake

Washington in non-HOVs. This is extremely important for freight movement. Eliminating severe congestion would also substantially reduce fuel consumption and air pollution emissions.



So far we do not have sufficient information to estimate the cost of congestion, or cost saving of congestion reduction. We must make sure that such information is produced as we zero in on study findings. Such information is particularly important if some type of toll or use pricing is imposed on the project to support its funding. The private cost savings of congestion reduction alone would likely offset such added private costs of facility use.

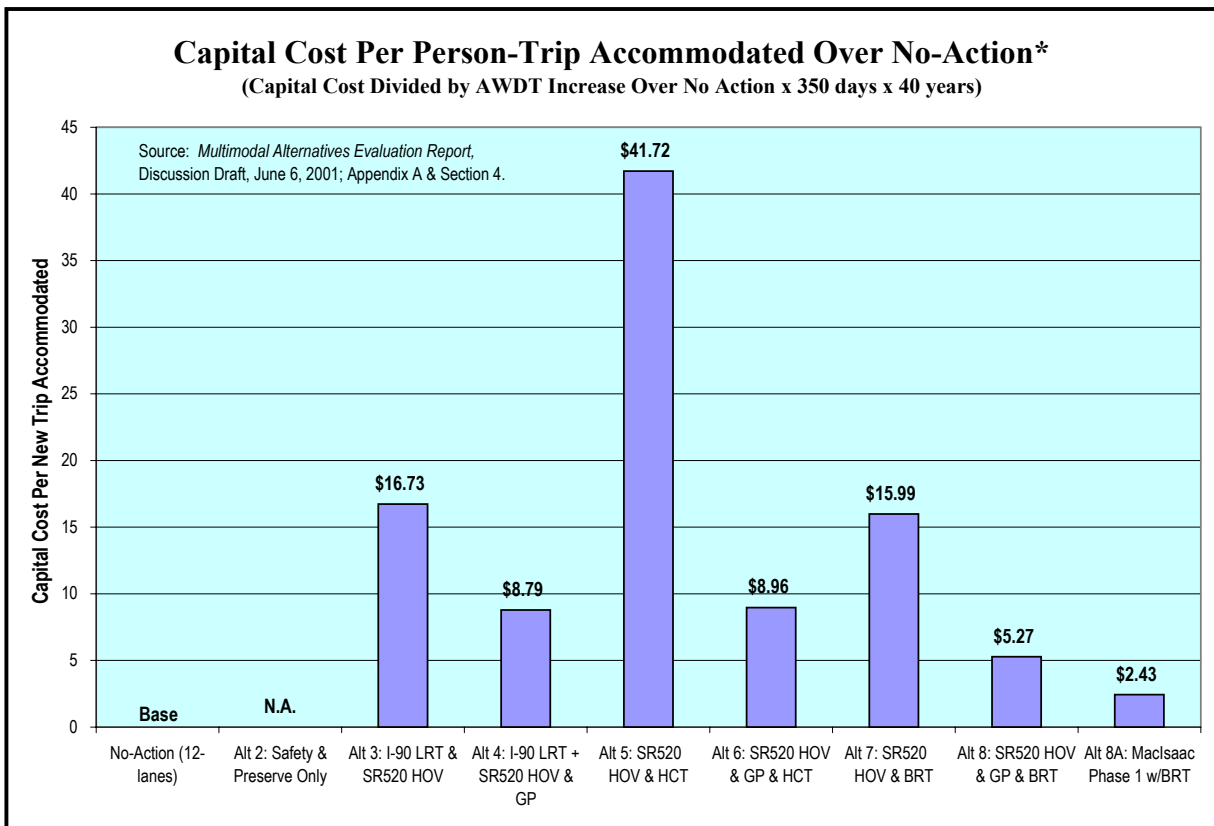
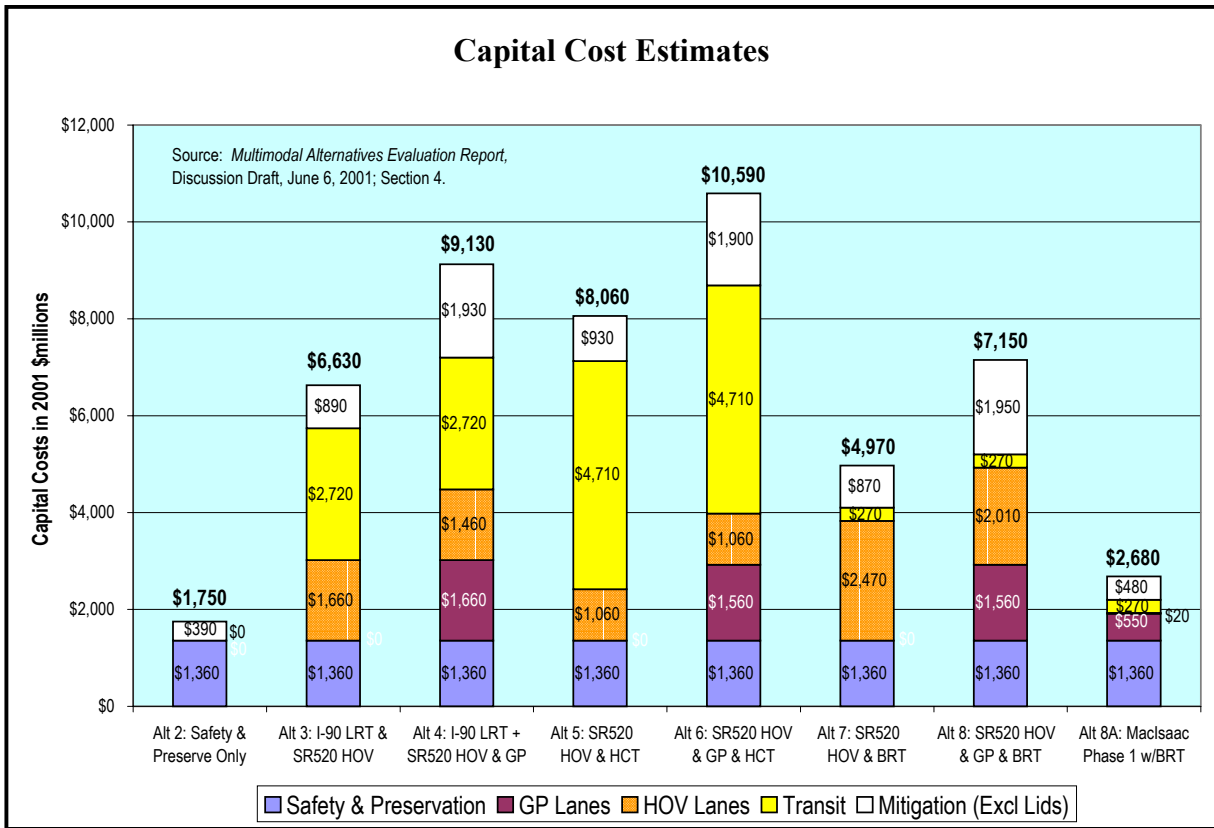
The upper chart on the following page compares the June 2001 capital cost estimates for each action alternative broken down into five important components. I-90 LRT has been removed from Alternative 2 to make it a more realistic baseline for comparison. Its base safety and preservation costs are included in all other action alternative cost estimates.

Remember above how we saw that transit ridership for the fixed rail modes would be little different from that attracted by the BRT alternatives. Yet the capital cost of the fixed rail options range from 10 to 20 times greater than BRT. That is a somewhat unfair comparison since the BRT mode should also be allocated up to half of the HOV lane costs. That brings transit-related costs in Alts 7 and 8 up to about half of the cost of LRT in the I-90 corridor and to about 30% of the cost of fixed rail in the SR-520 corridor. On the other hand, with BRT sharing the HOV lanes, the cost of those lanes is cut in half for the non-transit HOVs. In effect, by having transit share the HOV lanes, the SR-520 corridor "footprint" is reduced by 30 feet (more than two lanes) compared to the road structures needed to serve fixed rail transit on exclusive guideways.

There was some discussion that rail transit provided capacity needed to accommodate transit demand after 2020. Nonsense. By 2020 the 3+HOVs sharing the HOV lane would total less than 900 during the peak hour in the peak direction. That leaves capacity for up to 450 buses per hour sharing the lane at, say, 50 riders per bus. Bus capacity far exceeds any capacity that 4-car light rail trains could carry, or any Trans-Lake transit demand that could ever materialize in this century. The recent PB Farradyne report grossly understated the potential capacity of BRT by assuming that every bus would stop at every station in random fashion (non-platooned) with no bus bypass capability. If the transit system is designed to serve other than downtown Seattle, the buses would have numerous scattered destinations on each side of the lake, and bus stops along SR-520 would be "off-line" allowing bypass by non-stop express buses.

The bottom line of capital cost performance for each alternative is shown in the lower chart. The capital cost estimates were divided by an estimate of total persons crossing the lake over and above the No Action estimates over a 40-year period (assumed life of the capital investment). The cost per additional trip served for Alt 5 is extremely high. The reasons are its high cost of fixed rail transit and its poorest people-moving performance of all the alternatives. Alts 3 and 7 (HOV lanes only on SR-520) were the next worst cost performers. Alts 4 and 6 with GP lanes added cut the cost per added trip in half again. Alternative 8 with BRT cut that reduced cost per trip almost in half again. These findings assume that the costs of the 8-lane alternatives are still in the same ballpark as they were in June.

One final note on fixed HCT: Alt 5 is equivalent to an 8-lane alternative for SR-520 with two added HOV lanes and two added fixed rail lanes. Alt 6 would be a 10-lane alternative, the largest footprint of all alternatives studied. All evidence points to the elimination of these two alternatives as cost intensive without commensurate people-moving performance.





## **Conclusions**

- ◆ Retained alternatives must include Alts 1 and 2.
- ◆ Alternative 2 should have I-90 LRT removed from its action elements. LRT is not an element of maintenance and preservation. It is properly included in Alts 3 and 4.
- ◆ Alternative 5 should be dismissed without further study.
- ◆ Given Sound Transit's strong preference for fixed rail transit on I-90 rather than SR-520, and its 10 lanes on SR-520, Alternative 6 should also be dismissed without further study.
- ◆ Alts 3, 4, 7 and 8 are permutations of rail versus bus HCT and 6 lanes versus 8 traffic lanes on SR-520. I don't see how any of them can be dropped from being carried into the EIS phase. However, it should be duly noted that Alts 3 and 7 show poor results in attacking corridor congestion and meeting 2020 Trans-Lake people and freight-moving demands.

## **MacIsaac Alt 8A "Phase 1" Proposal**

From the analysis above, it appears to me that Alternative 8 is a necessary choice if addressing corridor freight and traffic congestion is a major objective of the corridor improvement program. It is also the most cost-effective alternative in terms of cost per additional trip accommodated over No Action. But its cost of \$7.15 billion without lids is great, and any lidding will drive its cost even higher. That could delay implementation for many years before full funding can be obtained. The estimated costs of Alt 3 are similar; and the estimated costs of Alts 4, 5 and 6 are much higher yet. It would be desirable to develop a phased approach to the SR-520 improvement program.

## **Most Urgent Improvement Needs**

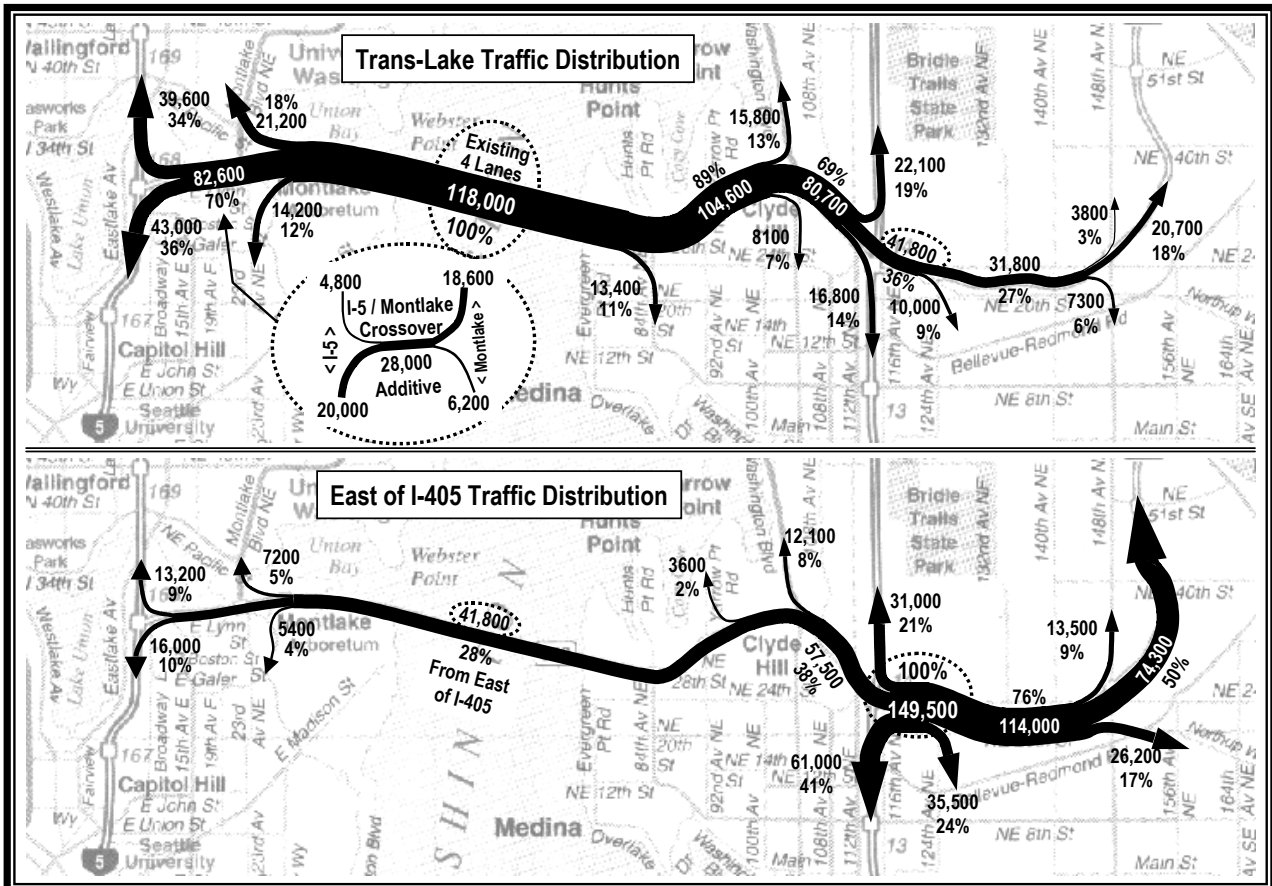
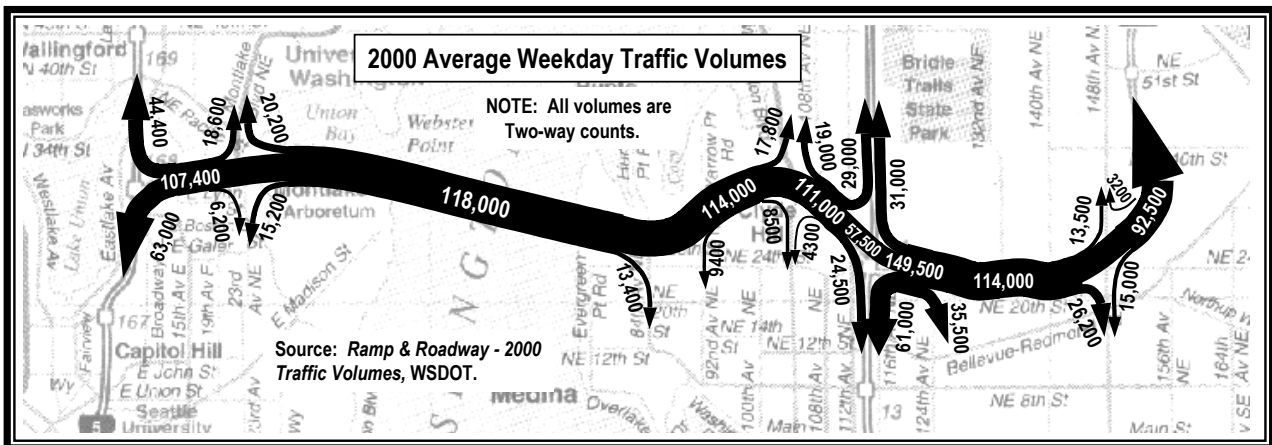
- ◆ Replace the floating bridge before it sinks and improve to WSDOT design standards, including safety shoulders and a bike/ped facility (Alternative 2).
- ◆ Replace the bridge approach structures and the Portage Bay Viaduct to provide necessary seismic structure and improve to WSDOT design standards, including safety shoulders and a bike/ped facility (Alternative 2).
- ◆ Improve the corridor "bottleneck" segment between Montlake and the old toll plaza to relieve the severe traffic queuing on both sides of the lake during both morning and afternoon peak periods that occur as a result of "feeder capacity" that far exceeds bridge capacity.
- ◆ Implement improvements that will ensure more rapid transit and HOV movement across the lake on SR-520.
- ◆ Implement improvements that will reduce congestion in the Montlake corridor.

## **Review of Corridor Travel Patterns**

Year 2000 AWDT traffic volumes on SR-520 and its ramp systems (generalized) are shown on the upper diagram below. The highest-volume section between I-5 and I-405 is on the floating

bridge segment. Its volumes would be much higher if bridge capacity could match its feeder capacity on both ends. Note that the highest-volume segment of the corridor occurs just east of I-405. Also note that only 38% of that traffic is east-west thru traffic under I-405; 62% interchanges with I-405. Therefore the SR-520 corridor is in effect two different corridors in terms of the major traffic patterns that it serves.

The following two diagrams show the estimated traffic flow patterns and volumes through these two maximum volume segments of SR-520. Note that only 36% of the bridge traffic flows thru to SR-520 east of I-405. Conversely, only 28% of the traffic on SR-520 east of I-405 is destined to the bridge. East-west thru-traffic capacity is not a major concern at the I-405 interchange.



Slightly over 30% of all traffic crossing the lake enters/exits at the Montlake and Arboretum ramps. During the PM peak hour 37% of all eastbound bridge traffic enters from these two ramps, even though they are severely metered. During the AM peak hour nearly 50% of all eastbound bridge traffic enters from these two ramps since they for some reason are not metered.

***The SR-520 bridge begs for an additional lane in each direction beginning from the Montlake ramps to accommodate the high traffic flows to and from the Montlake and Arboretum ramps.***

On the middle diagram note the insert called the “I-5/Montlake Crossover”. Nearly 30% of the traffic on the Portage Bay Viaduct is merely a short traffic pattern between Montlake and I-5. To better visualize the following comments, please view the upper lane configuration diagram on the next page.

In the eastbound direction on the Portage Bay Viaduct the three ramp lanes from I-5 are squeezed down to two lanes on the viaduct; and the high-volume exit to Montlake leaves these two lanes through Montlake highly underutilized. In the westbound direction, the unmetered westbound on-ramp from Montlake causes a dangerous merge and heavily loads the two westbound uphill lanes on the viaduct. The uphill traffic on these two westbound lanes splits into three I-5 ramp lanes plus an exit ramp to E. Roanoke Street.

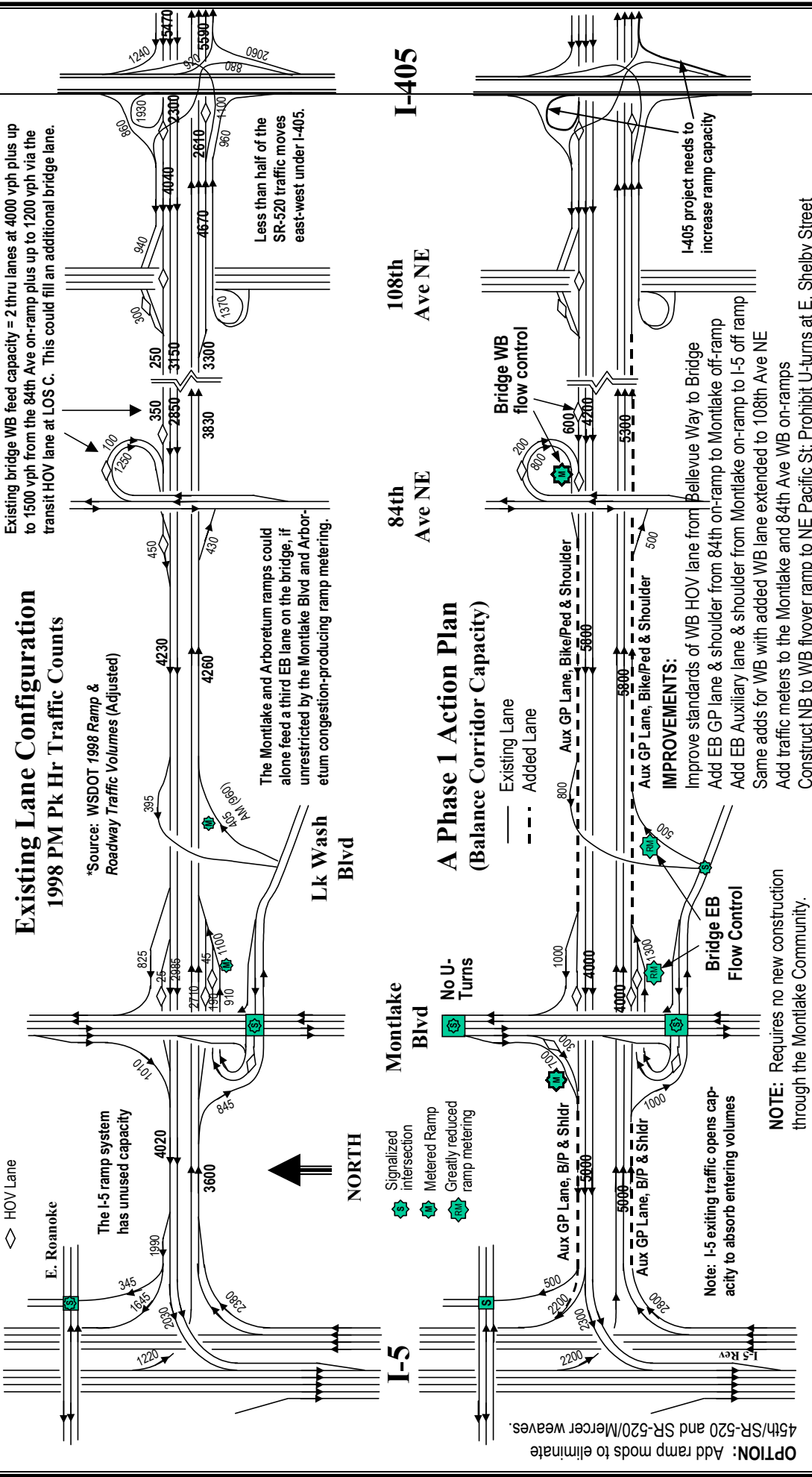
***The SR-520 Portage Bay Viaduct begs for an additional auxiliary lane in each direction to more safely accommodate the traffic merges and diverges at each end of the viaduct, the traffic weaving on the viaduct, and the westbound hillclimb for trucks and buses.***

Now look at the east end of the bridge segment. The bridge approach currently has two westbound GP lanes, an HOV lane, and a high-volume on-ramp from 84<sup>th</sup> Avenue NE. Those four approach lanes all neck down into two lanes on the bridge. ***This excessive westbound approach capacity begs for an additional westbound “auxiliary lane” on the bridge to accommodate the excess traffic demand between 84<sup>th</sup> Avenue NE and the Montlake off-ramp.***

In the eastbound direction, note that recently completed construction added a third EB lane slightly upstream from 108<sup>th</sup> Avenue NE, and a fourth EB lane from the 108<sup>th</sup> Avenue on-ramp. So SR-520 currently has four EB lanes approaching I-405. Two of these lanes serve the 45% of eastbound traffic exiting to I-405 plus eastbound HOV thru traffic. The other two lanes serve the eastbound thru-traffic on SR-520. These four lanes have capacity to serve up to a 50% increase in traffic volumes.

### **An Interim Phase 1 Action Plan – SR-520 West**

In light of the above discussion, there is a great opportunity to develop an initial improvement phase for SR-520 between I-5 and I-405 as an enhancement of the necessary Alt 2 Safety and Preservation action. A second and possibly concurrent phase of corridor improvement should attend to the uncompleted development phases at the Redmond end of the corridor – improvements that are presumably included in the Trans-Lake corridor action alts but which have been given little attention during the current study. After the more urgent initial phases are completed, and when additional funding is available, the ultimate corridor improvements could be pursued.



The lower diagram illustrates the interim improvements by the dashed lines. When the Portage Bay Viaduct is replaced under Alt 2, it could be replaced with a structure that could ultimately accommodate 4 lanes in each direction plus shoulders and the bike/ped facility. Its interim operation would be the existing four lanes plus an auxiliary lane in each direction between the Montlake ramps and the I-5 ramps. This expands the viaduct section to accommodate all of the capacity available at the I-5 end, and allows the existing four lanes through Montlake to operate at full capacity.

Eight lanes plus shoulders and a bike/ped facility on the floating portion would likely require two bridges like I-90, if the pontoons are constructed outside the lake. That would allow phased replacement of the existing pontoon structure. The bridge approaches from the Montlake ramps and from the old toll plaza could also be replaced in a phased operation that would result in an 8-lane trans-lake system. It would operate as a 6-lane facility with the outer lanes dropping at the Montlake ramps at the west end of the bridge – no expansion through Montlake.

In the eastbound direction the third lane would need to be extended through the Points Communities to the existing third and fourth eastbound lanes already in place from 108<sup>th</sup> to I-405. In the westbound direction the third bridge lane would merely pick up from the existing 3-lane roadway that currently ends at the old toll plaza.

There would be zero construction through the Montlake community with this Phase 1 plan. The plan would optimize the trans-lake capacity to accommodate the feeder capacity that already exists on each side of the lake, increasing bridge capacity by up to 50%.

### **Transit/HOV Operations**

The third lane additions on the bridge and viaduct would allow free-flow for all traffic if properly controlled at each end. The I-5 ramp capacity would not be able to overload the viaduct segment eastbound. Transit and HOVs would be able to flow freely with the rest of traffic without a designated lane. The Montlake and Arboretum ramps would have a full lane of additional capacity to absorb possibly unconstrained ramp flows. However, the ramp meters would still be available to assure that the bridge does not get overloaded, and transit/HOV would maintain its bypass lane at Montlake. East of the lake traffic flows diminish between the 84<sup>th</sup> Avenue off-ramp and the 108<sup>th</sup> Avenue on-ramp where the new third lane expands into the four-lane approach to I-405.

In the westbound direction, the existing three approach lanes would continue to operate as they do today, with the outer lane restricted to transit and 3+HOV use. The 84<sup>th</sup> Avenue on-ramp would be metered to ensure that the combined transit, HOV and non-HOV traffic flow onto the bridge does not exceed its expanded 3-lane capacity. By maintaining free-flow across the bridge, there would be no need to designate a transit/HOV lane. This eliminates the problem of building special HOV ramps at the west end. Transit/HOVs destined to the Arboretum, Montlake and I-5 north exit ramps could freely choose the outer lane. Transit/HOVs destined to I-5 south could freely choose the inner lane.

***What this interim phase accomplishes is balancing out existing capacity on the SR-520 corridor between I-5 and I-405. It eliminates the capacity constraints of the bridge and viaduct. It virtually increases trans-lake traffic capacity on SR-520 by nearly 50%.***

### **Montlake Boulevard Flow Improvements**

There are three major constraints to the flow of traffic along Montlake Boulevard: The severely metered SR-520 eastbound on-ramp, the U-turn operations at E. Shelby Street, and the north-to-west left-turn movement at NE Pacific Street. Traffic queues from the metered on-ramp back up traffic across the Montlake Bridge virtually preempting one of its two southbound lanes. Though less than one-third of the southbound traffic on the Montlake Bridge is destined to SR-520 eastbound, the entire southbound traffic flow on the bridge breaks down as a result causing traffic backups to Sand Point Way. Being able to remove the meter at the SR-520 Montlake on-ramp would eliminate this major constraint to southbound traffic flow on Montlake Boulevard.

U-turns at E. Shelby Street should be prohibited. This would reduce signal phase time to accommodating only the few left turns at that intersection, further improving southbound flow capacity on the Montlake Bridge. The U-turns from the SR-520 eastbound off-ramp cause a major disruption of off-ramp traffic flow and well as northbound traffic flow to the Montlake Bridge. The off-ramp trips destined to south of SR-520 would need to use the Arboretum off-ramp. Westbound on-ramp traffic from south of SR-520 would need to use the local routes to the Roanoke ramp system to I-5 north and south.

The major capacity constriction at the Pacific Street intersection is the north-to-west left-turn movement. Consideration should be given to constructing a flyover (under) ramp for this movement from the right lane on Montlake Boulevard, beginning immediately north of the Montlake Bridge. This would eliminate the northbound "weaving" problem on the bridge from the SR-520 off-ramp and the left-turn signal phase that constrains southbound flow on Montlake Boulevard. A pedestrian overcrossing system is needed at this intersection to further reduce both traffic and pedestrian disruptions and delays.

### **An Interim Phase 1 Action Plan – SR-520 East**

As mentioned above, it is important to keep the needs of the SR-520 corridor east of I-405 in mind as an important element of this Trans-Lake study. The east portion of SR-520 around downtown Redmond has uncompleted phases the are badly needed to help untie traffic problems. The Executive Committee and consulting team need to be reminded of addressing those needs and setting priorities as to which corridor needs take the highest priority for corridor funding.

### **Summary**

I would guesstimate that the Phase 1 Action Plan for SR-520 West presented above would cost in the order of \$2.5 billion. It would accomplish the essential needs of Alternative 2, increase the SR-520 corridor trans-lake capacity by up to 50%, cause no physical disruption in the Montlake Community, and potentially significantly improve traffic flow along Montlake Boulevard.

It would improve transit and HOV flow across Lake Washington as well as non-HOV and commercial vehicle speeds. It would leave "Phase 2" options open to accommodating an additional pair of HOV lanes between I-5 and I-405 as future needs may require under all other alternatives that may be taken forward into the EIS process.



**Comments/Input to Key Issues and Questions for Trans-Lake**  
**(from PSRC Staff -December 11, 2001)**

1. In Trans-Lake EIS, include sensitivity analyses for the alternatives to be studied that would examine potential implications on SR520 that could result from other major corridor and modal decisions outside SR520 process, such as: Sound Transit Link LRT extension to Northgate (with and without it); I-405 (BRT operational - yes/no; additional lanes in place – yes/no); I-5 (two-way HOV/express lanes operation - yes/no), the Viaduct replacement (SR-99 connection to I-5 - yes/no); I-90 (LRT operation or BRT operation); regional system pricing with managed lanes (with & without – PSRC to assist on this analysis outside of EIS)
2. Address the need for a financing element in Trans-Lake EIS. Include identification of directly related corridor-level phasing framework that includes a list of the most immediate construction and/or operational projects having independent utility.
3. In EIS, evaluate alternatives for degree of consistency with the regional framework policies under Vision 2020 & Destination 2030 (i.e., whether alternative, when compared to other alternatives, offers high, medium or low degree of consistency against major framework policies).
4. In the range of EIS alternatives, ensure compatibility to incorporate and/or adapt to a managed lane strategy for multiple corridors with features that enable consideration for pricing. (It appears there is a desire on several corridor fronts for PSRC to conduct a regional analysis of potential pricing options and applications; this will be taken up at PSRC in early 2002).
5. Incorporate total cost analysis as part of full cost/benefit comparison of alternatives
6. Tailor TDM strategies to address different character of each alternative to be studied.
7. System development relationship. Incorporate section that addresses and provides assumptions relative to potential phasing and timing (at least in 5 year increments) for SR520 financing, construction and estimate for initial year of operation. This information would add to a much needed set of understandings that has yet to be developed in the region for all major on-going corridor improvement efforts.

For any corridor to gain an understanding of what could happen when, the region needs to have a dialogue and seek some realism and focus for priority steps towards system and corridor implementation. It would also help get public support if we could better describe and communicate what is being proposed when and where, and what is being asked of them. This regional corridor blue print for action and development needs a system-wide view and should at least include SR520, I-405, I-90, SR99/Viaduct, SR509, SR167/Pierce Co. Extension, I-5 HOV/Pierce County, SR16 HOV/Bridge, Sound Transit Phases 1 south and north, Phase 2 to name but a few. *(The Regional Council should offer to work with WSDOT and Sound Transit to try to define potential financial development and phasing scenarios.)*



From: Patricia Serie  
Sent: Thursday, January 10, 2002 9:49 AM  
To: Jennifer Cannon  
Subject: FW: 520 Issues

-----Original Message-----

From: Barbara Culp [mailto:barbc@bicyclealliance.org]  
Sent: Monday, December 03, 2001 10:59 AM  
To: 'pserie@enviroissues.com'  
Subject: 520 Issues

Pat,

I would like a non-motorized update on all the alternatives at some future meeting. I know that we've heard it will be included in all the alternatives but it would help to have it stated again -- ever more strongly.

I also am interested in having a non-motorized component of TDM identified/added/talked about.

Thanks,  
Barbara

Barbara Culp  
Executive Director  
Bicycle Alliance of Washington  
206.224.9252  
www.bicyclealliance.org  
The Bicycle Alliance of Washington -- promoting bicycling for everyday transportation through education and advocacy.

**Translake/SR 520 Comments- Virginia Gunby,  
Representing 1000 Friends of Washington-12/7/01**

The outcome and success of the Translake, Part 2 and the EIS process will be the result of objective analysis and overall agreement on **reasonable and feasible EIS alternatives, “adequate” DEIS and FEISs**, and the final preferred alternative.

1. 1000 Friends of Washington’s position remains as it was in Phase 1 to be supportive of the “Seattle Alternative” presented in the 1997 Resolution 29574, to support only the addition of one new Bus Rapid Transit (BRT) lane in each direction across the lake and on the SR 520 Corridor. A rebuilt six lane facility, within the current right-of-way, should be included in the DEIS. In June it was estimated to be 135’ wide and cost \$5.74 billion. For each alternative the question should be how it will improve personal accessibility, transit/HOV use and bus travel time?
2. An eight-lane facility should not be included in the DEIS Alternatives. In June 2001 my record show that Alternative 6 with 8 lanes was 190’ wide as compared to the existing 58’ corridor, and was estimated to cost \$8.69 billion. It too large a scale, it costs too much and it would increase SOV capacity too much. It has significant cumulative socio-economic impacts and secondary effects to the adjacent communities, adding noise, polluting the environment and the air quality, and does not reinforce the adopted regional policies for reducing sprawl, congestion, auto-use and for enhancing use of transit.
3. We also know that it will create latent SOV demand. This is due to what Anthony Downs of the Brookings Institute calls “triple convergence” which fill the new capacity shortly after it is opened to traffic.
  - (a.) Drivers who used alternate routes switch to the temporarily improved highway,
  - (b.) Drivers who traveled before or after the peak hours start travelling in the peak hours, and worst of all -
  - (c.) Commuters who used to take public transportation or carpools switch to driving, since it is temporarily faster. In a short time the volumes have risen so that vehicles are again slowed and congested, and more lanes are promoted as the cycle repeats itself.

New road capacity must be managed carefully. The DEIS should describe strategies for how the latent demand can be reduced, so that any corridor alternative built will be sustainable?

4. As your analysis found, SOVs from an eight-lane SR 520 to I-5 cannot be assimilated into the overloaded I-5 freeway. So you have proposed to have cars exit into a costly tunnel into the already crowded Mercer St., or there is an alternate tunnel closer to the CBD. To handle too many cars at Montlake a bridge or tunnel to the Pacific Avenue/Montlake Boulevard intersection and widening Montlake Boulevard to NE 45<sup>th</sup> is suggested. Forget these engineering fixes! An expensive bridge or tunnel is too damaging to the city and the adjacent neighborhoods and attracts too many autos. It would require widening or reconstruction of many city arterials, and destroy the city livability. Limit the access to Pacific Place to only Bus/HOV by tunnel or bridge, that would exit to the Pacific Place interchange. Perhaps it could be combined with Sound Transit’s new research for getting the North Corridor Link across the ship canal on the eastside of the Montlake Bridge.
5. On the Eastside the basic framework of local arterials were never allowed to be built. Therefore many eastside short auto trips are made on the state highways. An eight lane SR 520 on the east-side would jam the existing limited arterial access system to SR 520, and back up cars into the adjacent neighborhoods as well as limit the ability for transit services to function effectively. The DEIS should describe how local arterials will or wont work with any alternative that is in the DEIS

6. It is also very important to continue to improve the Translake “system modeling” to evaluate the alternative of integrating alternative growth strategies with transportation proposals. Transportation investments can be a tool to help to manage growth, congestion, decrease sprawl and improve the quality of life in communities.
7. The model should also evaluate combined effects and interactions between the two connecting Interstates, I-405 and I-5, and any revisions planned on those corridors, and the other parallel part of the cross-lake east-west corridor, I-90. The system’s modeling update should include recent revisions in the PSRC’s adopted Regional Transportation Plan, Destination 2030, to promote compact urban centers served by a multi-modal transportation system and new system’s studies.
8. Any Translake transportation project alternatives in the DEIS should reinforce local and regional growth plans and policies to help reduce auto dependency and assist in rebuilding compact, mixed-use, walkable, transit and bike friendly and livable communities. How can the Translake project reduce the demand for Translake travel through improved land use planning?
9. The new flexible TDM package should be designed to be responsive to and tailored to each proposed DEIS alternative. The staff’s present position of having only one TDM alternative for all of the options is not logical, and conflicts with the NEPA/SEPA requirements for developing alternatives. It makes no sense to have the same TDM program for alternatives that could range from no expansion, smallest footprint, to the addition of two lanes of capacity each way for an eight-lane facility. How can the Translake TDM program be used to reduce the overall use of single occupant vehicles?

The most effective time to start to implement TDM is early during the start of reconstruction. This is a key time to provide alternative TDM programs to help users and reduce congestion caused by corridor construction-related delays. This is an important addition that needs to be made to the Translake TDM proposal in the DEIS.

10. An EIS analysis should be done on the effect regional tolls or user’s fees would have on reducing auto trips and increasing transit/HOV use. (In Phase one we learned that tolls could help increase transit use and reduce up to 15% of the projected auto trips.) Any funding could be used to pay off construction bonds and on alternatives that are designed to reduce SOV trips and increase transit/HOV use. Some type of regional tolling system which includes SR 520, I-90 and I-405 could pay for part of the construction, maintenance and operations costs of the new facilities on each of the corridors and transit service expansion.

Analysis concludes that there is a larger percentage of work-trips in the AM and PM peak on the SR 520 Corridor than other major state highways such as I-405. The EIS should consider the alternative of conversion of a regular lane to a designated HOV-3 occupants lane, particularly at peak times. It could be timed for the opening of the new facility, or to be implemented in a later phase to preserve the long term sustainability of the reconstructed corridor.

High Capacity Transit-We support the staff's recommendation for Bus Rapid Transit (BRT) on SR 520 and keeping the "1976 I-90 Memorandum of Agreement" promise to use the center lanes of I-90 for 2-Way Center Lane Transit now. An analysis of the benefits and costs of including HOVS in the BRT lane versus only BRT. We request that EIS to include a comparative evaluation of the conversion of one of the regular lanes to a three person HOV lane at least at the peak hours versus including HOVs in the BRT lane. Consideration should be also given to new SR 520 HOV/Bus access ramps at critical locations in addition to I-5/SR520.

11. Unfortunately eastside HCT is currently planned by Sound Transit for at least 10 to 15 years in the future. As we have learned with I-90, memories dim over the years and the importance of protecting the I-90 center lane right-of-way reserved for future HCT is a challenge that should be faced now. We support development of a coordinated Translake/I-90 Corridor Management Agreement to replace the current 1976 agreement as part of the both the Translake and I-90 Transit/HOV DEIS, to insure that the I-90 center lanes right-of-way will really be available for HCT when needed.

A worst case I-90 Scenario should be considered in the Translake DEIS, because of its impact on SR 520's future. What if a significantly enlarged scale I-405 is built as currently planned in the I-405 Tier 1, Programmatic/Corridor level DEIS, and there is no regional toll system to reduce trips? The SOV traffic growth generated between I-405 and I-90 would overwhelm the narrowed three east/west SOV lanes. There would be an immediate demand for revising and opening the center lanes for all SOV's to use as express lanes, not just for Mercer Islanders cars, as currently permitted. Mercer Island would lose their preferential access and two-way center lanes reserved for HCT's future eastside right-of-way would be gone forever.

We support the initiation of two-way transit now in the I-90 center lanes ASAP, and allowing Mercer Island SOVs to enter, under an new enforceable and monitored Memorandum of Agreement, only until bus transit speeds are reduced to below 45MPH. This would make a permanent commitment now to reserving that right-of way for future HCT. With additional incentives of a Mercer Island Park and Ride building provided by Sound Transit and added convenient peak hour and game local transit service on Mercer Island, transit ridership will increase and the need for a lane of I-90 SOV capacity will decline.

The DEIS should also evaluate the implementation of HCT on the SR 520 corridor sometime in the future, so that it isn't precluded. The construction of the BRT lanes will reserve HCT right-of-way as a good start, but if HCT is used in the BRT lanes lets not plan to re-stripe the lanes to gain two-way Translake HOV/Transit lanes.

Your SR 520 current projections predict that the HCT on I-90 would be at 50% capacity at 2030, assuming the present sprawling land use patterns into the future. That may be conservative, because any HCT, if well designed it will tend to compact growth into centers.

### **Other Issues-**

Lids- It appears that noise walls are a far more effective than costly lids for reducing noise to adjacent communities. There may be a few areas where reconnecting the community and providing open-spaces and landscaping, are appropriate mitigation. For example a lid where SR 520 joins I-5 at Seward School would be a significant reconnection and mitigation step for the Roanoke Park community, particularly if you are planning to construct drop HOV lanes into I-5 HOV express lanes south and north. Currently children are unable to walk on the south side of the Roanoke St. overpass to school, and parents walk with them to assure their safety on a circuitous

passage, crossing at a freeway off-ramp to get to Seward school. This would be a beneficial retrofit and reconnection to a community damaged by that I-5/SR 520 interchange long ago.

Hazardous and Flammable Material Trucks/Cargo- It is my understanding that the I-90 tunnel is the only Interstate tunnel in the U.S. that allows trucks with these materials to travel in the tunnel. Special fire-suppression safety equipment was installed in the tunnel to permit their transit. If R8a is built with the narrowed lanes and increased safety risks, the FHWA could require that due to safety issues, these kind of freight trucks would be rerouted to alternate routes, such as SR 520, rather than have a major disaster in the I-90 tunnel. The Translake DEIS should consider the impact of the transfer of flammable freight trucks to SR 520 as a result of such a decision.

**Other Important NEPA Issues that are Less Significant to 1000 Friends Overall Objectives**

Endangered Species Act Issues, Section 4f, Foster Island Impacts, Wetlands, Wildlife Habitat, Watershed and Stormwater Management, Construction Impacts, Early Actions, Recreation Areas Impacts, Displacement of Institutions, Businesses and/or Residences are other DEIS issues. They are important DEIS project components of that must be considered when contemplating rebuilding a controversial transportation facility in a built-up diverse, well-planned urban region in order to protect our quality of life here.

**Process Issues**

**We'd like to request that an independent Expert Review Panel consisting of local and national transportation professional be used to objectively review and make substantive comments on the proposed Translake DEIS for adequacy and quality of product.** This request is made because Translake is a controversial project and a fair resolution of the critical issues needs to go beyond competition of local parochial interests to the development of a proposal that will have lasting benefit to the growth and development of the region.

Thanks for letting members of the various Translake Committees make comments before the Executive Committee makes its decision on which alternatives will be in the DEIS. If this DEIS process is "Streamlined" under federal T-21 and the new state law ESB 6188, there needs to be a complete information on the revisions to the various Translake Committees about how the statutory provisions under NEPA and SEPA will be adequately met.

We request that there be adequate public notice and involvement in the next steps of the Translake process. It is particularly important that all comments on a future DEIS be read, considered and responded to prior to the selection of a Preferred Translake Alternative.

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Conversation with Kingsley JonesonFrom: Patricia Serie  
Sent: Thursday, January 10, 2002 9:50 AM  
To: Jennifer Cannon  
Subject: FW: Conversation with Kingsley Joneson

-----Original Message-----

From: Wilcox, Kirk [mailto:wilcoxk@soundtransit.org]  
Sent: Wednesday, December 05, 2001 11:24 AM  
To: Peacock, Jeff; 'Rubstello, Les'; 'Amy Grotefendt'; 'Pat Serie'; Gilliland, Barbara  
Cc: Goodell, Jennifer; Dieterich, Shannon  
Subject: Conversation with Kingsley Joneson

I spoke with Kingsley of the Advisory Committee at 10:45 AM on 12/5/01.

He had several questions about the I-5/SR 520 I/C following last week's All-committee meeting:

1. How far north does the widening for the right-side ramp from SB I-5 to EB SR 520 go?

The widening would extend the length of the concrete approach spans to the Ship Canal Bridge, approximately to Gwinn Pl. and Allison St.

2. Would the WB SR 520 to SB I-5 ramp look like the existing ramp?

Yes, except that the ramp would span over the SB I-5 roadway before touching down.

3. It was mentioned in the committee meeting that the WB SR 520 to SB I-5 ramp would be barrier separated from the SB I-5 lanes, is this correct?

No, there was some misunderstanding about the barrier at the meeting. The ramp would touch down and match SB I-5 as quickly as possible and there would be no barrier separating the ramp lanes from the freeway lanes.

4. Will the Boylston - SB and NB - Lakeview ramps stay open?

So far, we have been able to fit in the local access ramps geometrically, but we are still working to find if they can be left in place without deteriorating the freeway operations.

5. Is the 6-lane interchange the same as that proposed for 8 lanes?

Yes, the project team feels that the operational benefits to the freeway in the 8-lane alternative are great enough to propose the same interchange for the 6-lane alternative.

6. Kingsley had a question about the determination of environmental impacts. I referred him to Lorie.

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PAT SERIE/AMY CARLFENDT —

Provided below are my inputs to the selection of alternatives for further study.

Roadways— I prefer the six-lane alternatives. Preferences between alternatives 3, 5, and 7 will depend on inputs during the 1/9/02 Workshop.

1) Range of interchanges—my comments are limited to the 1-5/PR-520 interchange—

I request that committee Workshop presentations and public Open House displays clearly identify potential/possible/probable ramp closures.

I request that presentations address the compatibility of TLW features with other co-located transportation projects including the following:

- a) Reversible lane night closures.
- b) Addition of 1-5 walls and re-surfacing the bottom surfaces of 1-5 upper lanes to reduce express lanes reflected noise
- c) Addition of a new bridge for Sound Transit's crossing of the ship canal. (alternative to tunnel).

2) Community mitigation and enhancements

I request that presentations include possible neighborhood-friendly refurbishment of the shoreline and hillside under the west end of the Portage Bay Viaduct.

—continued—



Community mitigation and enhancements - continued -

I request that presentations include the reminder that that mitigations are integral and inseparable from other project design elements.

Thank you,

Kingsley Joneson